

## ABSTRACT

A capnograph which performs an analysis of the breath waveforms measured by the carbon dioxide sensor, interprets the results of this analysis, and outputs to the operator diagnostic information about the respiratory status of the patient, or about the adequacy of the breathing support provided to the patient. The instrument compares a number of parameters characteristic of the waveforms of the patient's breath with an internal library of the values of those parameters expected from normal waveforms stored in its memory. These parameters may either relate to specific features of the waveform in the time domain, or may characterize spectral components of the waveform in the frequency domain. The capnographic waveform analysis may be combined with further non-invasive measurements in order to provide an indication of the deviation of the value of  $\text{EtCO}_2$  from  $\text{PaCO}_2$ .